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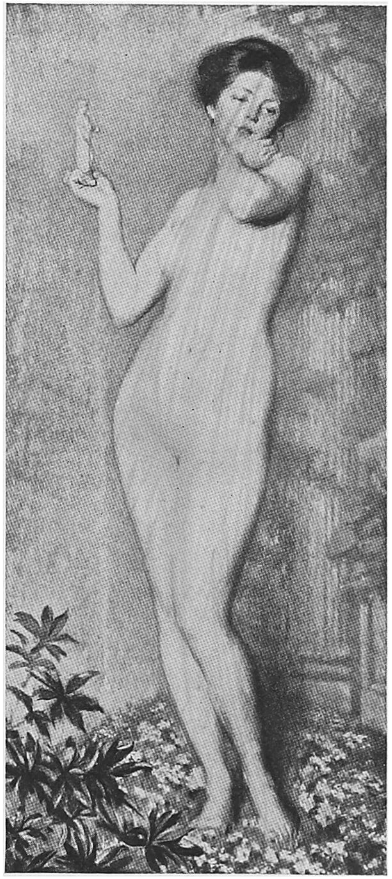
HAMMERED METAL IN STATUE MAKING.

The large quadriga which Daniel C. French and E. C. Potter have sculptured for the new State Capitol in St. Paul, Minn., has attracted much attention from the sculptors in New York. Their interest is due largely because the work has not been cast in bronze, but hammered out of sheet metal. This has been done in the John Williams studio in New York and is understood to be the largest piece of work of its kind executed in this manner in America.

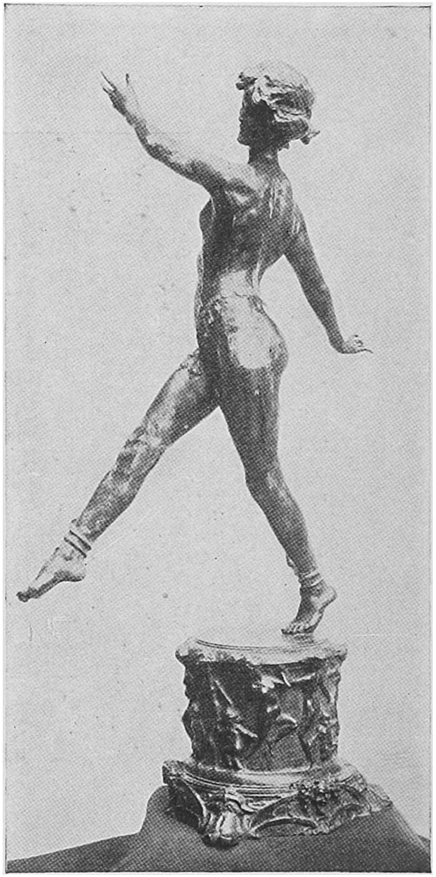
POLAR BEARS
By Frederick G. R. Roth

St. Gaudens' statue of Diana, on the tower of the Madison Square Garden, New York, was hammered out of metal, but is not nearly so large a work as this quadriga. The Statue of Liberty on Bedloe's



THE SPIRIT OF ANTIQUE ART
By Philip L. Hale

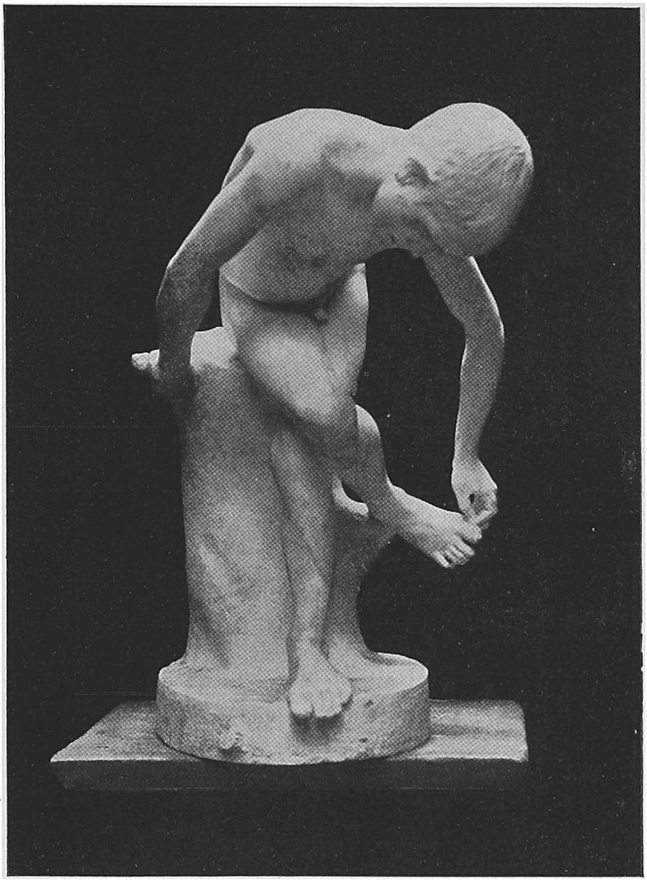
A SUMMER EVENING
By J. Alden Weir



DANCING GIRL
By Paul Nocquet

Island was also hammered out of sheet metal, but was executed abroad.

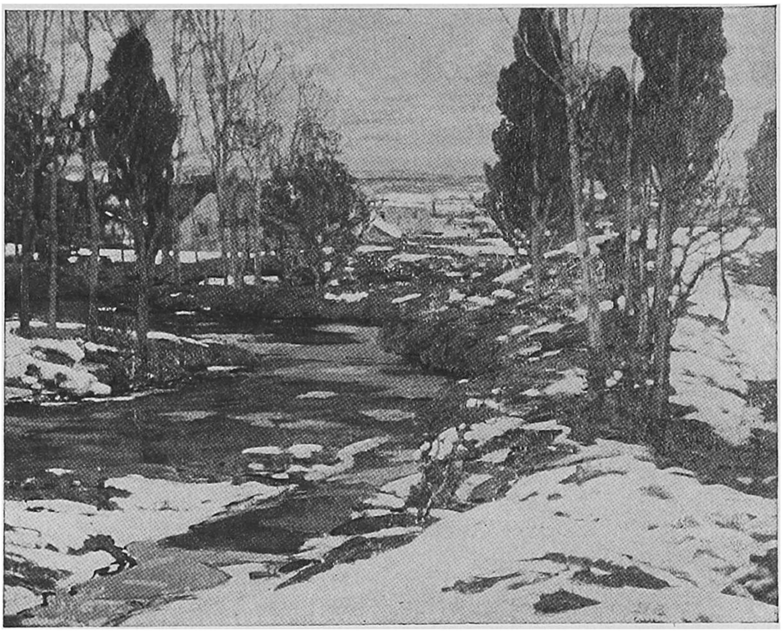
The quadriga is a very large affair, something like twenty-five square feet in dimensions when assembled, and, as already stated, nothing like it in importance ever has been executed in hammered sheet metal in this country. That is one reason why the Williams studio has been visited by many sculptors who have followed the progress of the work with the greatest interest.



AU BORD DU LOING
By F. M. L. Tonetti

A Graeco-Roman chariot in the Metropolitan Museum of Art, which is stamped bronze metal, the same material that is being used for the quadriga, is regarded as one of the earliest examples of sheet metal work. In the chariot the metal is riveted to a wooden frame, something that is not uncommon in these early examples of sheet metal.

This style of workmanship, however, was not used with great frequency until mediaeval times. The ancients, like us moderns, preferred to cast their sculptures in bronze instead of hammering them



A MIDWINTER THAW
By W. Elmer Schofield

out in the thinner sheet metal. But in mediaeval times a great deal of church work was made of sheet metal, which was stamped out in wooden or metal moulds. On much of this work, when it is closely examined, the technique of the hammering in the mould is still visible, especially when the mould was of wood, as the grain of the wood shows on the metal. These moulds were used over and over again, and the ornaments duplicated in the same or other structures, very much as is done now. One reason for doing this then, as now, was cheapness. Another reason was the fact that the sculptures often were placed on frail constructions —over a reredos, or used in sanctuary lamps or on pulpits, therefore had to be light.

Lightness also was the consideration which caused the Diana of the Garden and the Statue of Liberty to be hammered out of sheet metal, instead of cast in bronze. The Diana is a large statue, when viewed from a level, but two men could lift it with ease, whereas a yoke of oxen would have hard work hauling it were it cast in bronze. In that case, too, the Madison Square Garden tower hardly would be able to support it. Now being only of sheet metal it is light enough for a weather vane.

These considerations did not, however, enter into the choice of method for executing the French-Potter quadriga. Every sculptor prefers to have his work cast in bronze, but in this instance the problem of cost came into play and it would have been impossible for the sum appropriated to have secured for the new Capitol in St. Paul a piece of sculpture of such dignity and dimensions as the French-Potter quadriga had it been cast in bronze. It may be added that in the opinion of various New York sculptors who have watched the hammering of this great sculpture out of sheet metal the work has been done with unusual skill. Not only have all the details been brought out, but the sheet metal used has been thicker than ordinarily employed, so that, as one sculptor expressed it, "the quadriga will last as long as the building on which it stands."

The pieces of sheet metal after stamping in the moulds were reinforced in the back, then riveted together and then attached to a steel construction. This steel framing gives great solidity to the group.

Considerable small statuary work is done in sheet metal, especially for soldiers' monuments. In these instances again the chief reason for the choice of material is cheapness. And this also is the case with a lot of architectural sculpture, like cornices and ornamental details that are duplicated all over the country. The quadriga, however, is something quite sui generis.

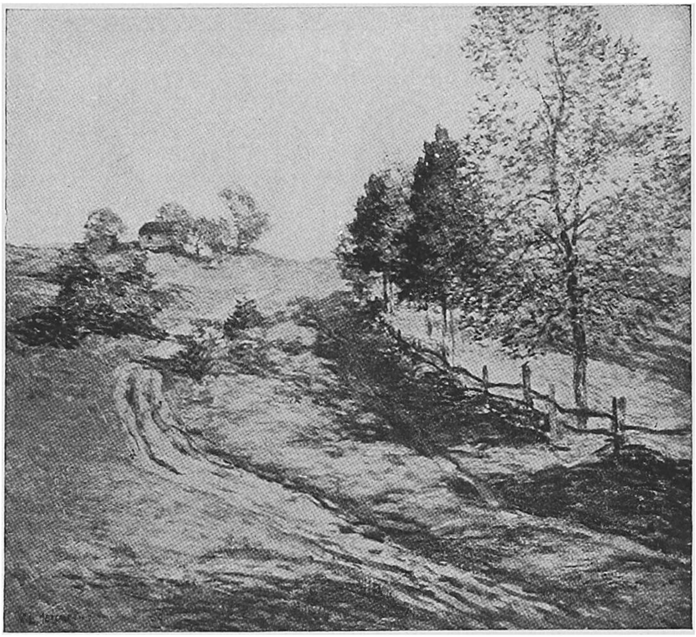
Architectural sculpture like this quadriga depends for its effectiveness not only upon the workmanship of the sculpture itself, but also upon the manner in which it is placed. One of the first big things in the way of architectural sculpture done in this country was Crawford's bronze Statue of Liberty, on the dome of the Capitol at Washington. This statue, however, is placed so high in the air that you cannot judge whether it is good or bad. Next in order, a number of post offices and

CONFIDENCES
By Walter McEwen

custom houses were supplied with pedaments and groups carved in stone, like the groups on the post offices in Boston and St. Louis, which were done by Mr. French. Perhaps the largest architectural piece of sculpture in this country, even larger than the Crawford Statue of Liberty in Washington, is the Calder statue of William Penn in bronze exerted its full effect. Unlike this correct condition of affairs, the statue in bronze executed by Mr. Brewster for the State House of Providence, although well modelled, is so high in the air that it has no Columbus in the chariot. The water gate was a conspicuous success; it could be viewed from the proper perspective, so that the sculpture on the tower of the City Hall in Philadelphia.

Work on the Chicago Exposition produced noteworthy attempts, and on the water gate in that exposition stood the first model of the present French-Potter quadriga, but with two outriders flanking the group and silhouette.

P. C. R.



JOHNNY CAKE HILL
By Willard L. Metcalf

Note—For Other Pennsylvania Academy Pictures see News Section.